



Patent
Attorney Docket No. 1018793-000253

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

Takeya Abe et al.

Application No.: 09/936,514

Filing Date: September 14, 2001

Title: PROCESS FOR PURIFYING AMIDE
COMPOUND

) MAIL STOP IDS
) Group Art Unit: 1652
) Examiner: CHRISTIAN L FRONDA
) Confirmation No.: 4410
)
)

FOURTH
INFORMATION DISCLOSURE STATEMENT
TRANSMITTAL LETTER

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Enclosed is a Fourth Information Disclosure Statement (IDS) and accompanying form PTO-1449 for the above-identified patent application.

- No additional fee for submission of an IDS is required.
- The fee of \$ 180 as set forth in 37 C.F.R. § 1.17(p) is also enclosed.
- A statement under 37 C.F.R. § 1.97(e) is also enclosed.
- A statement under 37 C.F.R. § 1.97(e), and the fee of \$ 180 as set forth in 37 C.F.R. § 1.17(p) are also enclosed.
- Charge _____ to Deposit Account No. 02-4800 for the fee due.
- A check in the amount of _____ is enclosed for the fee due.
- Charge \$ 180 to credit card for the fee due. Form PTO-2038 is attached.
- The Director is hereby authorized to charge any appropriate fees under 37 C.F.R. §§ 1.16, 1.17 and 1.21 that may be required by this paper, and to credit any overpayment, to Deposit Account No. 02-4800. This paper is submitted in duplicate.

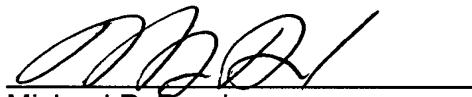
Date July 13, 2007

Respectfully submitted,

P.O. Box 1404
Alexandria, VA 22313-1404
858 509 7300

BUCHANAN INGERSOLL & ROONEY LLP

By:



Michael P. Reed

Registration No. 45647

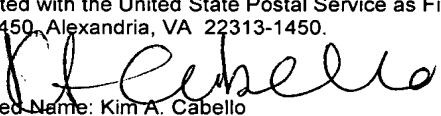
07/18/2007 WASFAW1 00000023 09936514

01 FC:1806

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Date of Deposit July 13, 2007



Typed Name: Kim A. Cabello



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FOURTH INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

In accordance with the duty of disclosure as set forth in 37 C.F.R. § 1.56, the accompanying information is being submitted in accordance with 37 C.F.R. §§ 1.97 and 1.98.

Pursuant to 37 C.F.R. § 1.98, a copy of each of the documents cited is enclosed.

The documents are being submitted after a first Office Action on the merits but prior to the closing of prosecution, therefore under 37 C.F.R. § 1.97(c), the fee set forth in 37 C.F.R. § 1.17(p) is enclosed.

A fee of \$ 180 as set forth in 37 C.F.R. § 1.17(p) is enclosed.

I, the undersigned, hereby state in accordance with 37 C.F.R. § 1.97(e)(1) that no item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three (3) months prior to the filing of this Information Disclosure Statement. communication from a foreign patent office in a counterpart foreign application not more than three (3) months prior to the filing of this Information Disclosure Statement.

FOURTH Information Disclosure Statement
Application No. 09/936,514
Attorney Docket No. 1018793-000253
Page 2

To assist the Examiner, the documents are listed on the attached form PTO-1449. It is respectfully requested that an Examiner initialed copy of this form be returned to the undersigned.

The Director is hereby authorized to charge any appropriate fees under 37 C.F.R. §§ 1.16, 1.17 and 1.21 that may be required by this paper, and to credit any overpayment, to Deposit Account No. 02-4800. This paper is submitted in duplicate.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY LLP

Date: July 13, 2007

By:



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Alexandria, VA 22313-1404
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Substitute for form 1449/PTO & 1449B/PTO		Complete if Known
FOURTH INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		
11-18-2007		
Application Number	09/936,514	
Filing Date	September 14, 2001	
First Named Inventor	Takeya Abe et al.	
Examiner Name	CHRISTIAN L FRONDA	
Attorney Docket No.	1018793-000253	

U.S. PATENT DOCUMENTS

FOREIGN PATENT DOCUMENTS

NON-PATENT LITERATURE DOCUMENTS

Examiner Initials	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.

Examiner Signature		Date Considered	
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with M.P.E.P. § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

1/7/1

DIALOG(R)File 351: Derwent WPI

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WPI Acc no: 1973-31508U/197322

Refining aqs acrylamide solns - by treatment with active charcoal contg adsorbed cupric ions, to eliminate changes in co

Patent Assignee: MITK (MITK); MITSUI TOATSU CHEM INC (MITK)

Inventor: ASANO S; HONDA T; TSUCHIYA R; YOSHIMURA K

Patent Family (14 patents, 9 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
BE 792366	A	00000000				197322	B
NL 197216470	A	00000000				197326	E
DE 2259096	A	00000000	DE 2259096	A	19721202	197327	E
FR 2164324	A	00000000				197341	E
JP 48062713	A	00000000				197349	E
JP 48062714	A	00000000				197349	E
JP 48062715	A	00000000				197349	E
DE 2259096	B	19750828	DE 2259096	A	19721202	197536	E
GB 1404798	A	19750903				197536	E
CA 974257	A	19750909				197539	E
US 3923741	A	19751202	US 1972312337	A	19721205	197551	E
JP 1976028608	B	19760820				197638	E
CH 582533	A	19761214				197702	E
JP 1977035648	B	19770910				197740	E

Priority Applications (no., kind, date): JP 197197893 A 19711206; JP 197197892 A 19711206;
JP 197197891 A 19711206

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
BE 792366	A	FR			
CA 974257	A	EN			
CH 582533	A	DE			

Alerting Abstract BE A

The aqs. acrylamide soln. is obtained by a catalytic hydration process from acrylonitrile using a Cu catalyst and the active C material is pre-treated e.g. with aqs. Cu(NO₃)₂ soln., so that it

contains adsorbed is not <0.05 pt. Cu/100 pt. active C.

Title Terms /Index Terms/Additional Words: REFINE; ACRYLAMIDE; SOLUTION; TREAT; ACTIVE; CHARCOAL; CONTAIN; ADSORB; CUPRIC; ION; CHANGE; CO

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
B01D-015/00			Main		"Version 7"
C07C-102/08; C07C-103/13; C07C-103/133			Secondary		"Version 7<

US Classification, Issued: 564206000, 564127000

File Segment: CPI

DWPI Class: A41; E16

Manual Codes (CPI/A-N): A01-D06; E10-D03

1. *Original Publication Data by Authority*

2. *Belgium*

Publication No. BE 792366 A (Update 197322 B)

Publication Date: 00000000

Assignee: MITSUI TOATSU CHEM INC (MITK)

MITSUI TOATSU CHEM INC (MITK)

MITK (MITK)

Language: FR

Priority: JP 197197891 A 19711206

JP 197197892 A 19711206

JP 197197893 A 19711206

Original IPC: B01D-15/00 C07C-102/08 C07C-103/13

Current IPC: B01D-15/00 C07C-102/08 C07C-103/13

3. *Canada*

Publication No. CA 974257 A (Update 197539 E)

Publication Date: 19750909

Language: EN

4. Switzerland

Publication No. CH 582533 A (Update 197702 E)

Publication Date: 19761214

Language: DE

5. Germany

Publication No. DE 2259096 A (Update 197327 E)

Publication Date: 00000000

Verfahren zur Reinigung von waessrigen Acrylamid-Loesungen

Assignee: Mitsui Toatsu Chemicals, Inc., Tokio

Inventor: Asano, Shiro, Yokohama, Kanagawa

Yoshimura, Kiyotaka, Mobara, Chiba

Tsuchiya, Ryoji, Kamakura

Honda, Tadatoshi, Yokohama, Kanagawa, JP

Agent: Ratzel, G., Dipl.-Chem. Dr.rer.nat., Patentanwalt, 6800 Mannheim

Language: DE

Application: DE 2259096 A 19721202 (Local application)

Claim:

- *1. Verfahren zur Reinigung von waessrigen Acrylamid-Loesungen, dadurch gekennzeichnet, dass man diese Loesung mit Aktivkohle behandelt, welche vorher Kupfer-II-Ionen absorbiert hat.*

Publication No. DE 2259096 B (Update 197536 E)

Publication Date: 19750828

Verfahren zur Reinigung von waessrigen Acrylamidloesungen

Assignee: Mitsui Toatsu Chemicals, Inc., Tokio

Inventor: Asano, Shiro, Yokohama, Kanagawa

Yoshimura, Kiyotaka, Mobara, Chiba

Tsuchiya, Ryoji, Kamakura

Honda, Tadatoshi, Yokohama, Kanagawa, JP

Agent: Ratzel, G., Dipl.-Chem. Dr.rer.nat., Patentanwalt, 6800 Mannheim

Language: DE

Application: DE 2259096 A 19721202 (Local application)

Original IPC: C07C-103/133

Current IPC: C07C-103/133(A)

6. France

Publication No. FR 2164324 A (Update 197341 E)

Publication Date: 00000000

Language: FR

7. ***Great Britain***

Publication No. GB 1404798 A (Update 197536 E)

Publication Date: 19750903

Language: EN

8. ***Japan***

Publication No. JP 48062713 A (Update 197349 E)

Publication Date: 00000000

Language: JA

Publication No. JP 48062714 A (Update 197349 E)

Publication Date: 00000000

Language: JA

Publication No. JP 48062715 A (Update 197349 E)

Publication Date: 00000000

Language: JA

Publication No. JP 1976028608 B (Update 197638 E)

Publication Date: 19760820

Language: JA

Publication No. JP 1977035648 B (Update 197740 E)

Publication Date: 19770910

Language: JA

9. ***Netherlands***

Publication No. NL 197216470 A (Update 197326 E)

Publication Date: 00000000

Language: NL

10. ***United States***

Publication No. US 3923741 A (Update 197551 E)

Publication Date: 19751202

Acrylamid aqueous solution refining process

Assignee: Mitsui Toatsu Chemicals, Incorporated

Inventor: Asano, Shiro, JA, US

Yoshimura, Kiyotaka

Tsuchiya, Ryoji

Honda, Tadatoshi

Agent: Ceccon, Clario

Language: EN

Application: US 1972312337 A 19721205 (Local application)

Original US Class (main): 564206

Original US Class (secondary): 564127

Original Abstract:

There is disclosed an acrylamide aqueous solution refining process wherein an acrylamide aqueous solution obtained through a catalytic hydration process etc. is distilled to remove acrylonitrile when necessary; then is treated with active carbon, which has been arranged to adsorb cupric ion before use so that the polymerization of acrylamide that tends to take place around active carbon can be prevented thereby; and, if necessary, deionization is carried out by means of ion-exchange resin.